

Please make the following amendments.

In the Specification

Please amend the Summary of the Invention as follows:

Page 4, line 17 through page 5, line 15, please delete the entire text under the heading "Summary of the Invention." Please insert - One aspect of the present invention is a method for selecting an operating second intermediate frequency in a heterodyne receiver having a plurality of predetermined selectable receive frequencies and having first and second intermediate frequency (IF) circuits, the second IF circuit having a passband capable of being centered on at least two predetermined second intermediate frequencies, the first IF circuit being coupled to the second IF circuit for supplying an input signal thereto. The method comprises the steps of (a) selecting one of the plurality of predetermined selectable receive frequencies, and (b) selecting prior to generation of any undesirable spurious frequency one of the at least two predetermined second intermediate frequencies to be the operating second intermediate frequency for the second IF circuit in response to step (a). The operating second intermediate frequency is selected such that substantially all undesirable spurious frequencies generated will fall outside of the passband of the second IF circuit.

Another aspect of the present invention is a heterodyne receiver for receiving radio frequency signals comprising a receive frequency selector for selecting one of a plurality of predetermined selectable receive frequencies to be the operating receive frequency, and a controller coupled to the receive frequency selector for controlling the heterodyne receiver in response to the operating receive frequency selected. The heterodyne receiver further comprises a first intermediate frequency (IF) circuit coupled to the controller for generating a first

frequency and the selected at least one of the at least two predetermined intermediate frequencies.]

2. (Amended) The method according to claim 1 further comprising the step of (c) [causing each of the at least one IF circuit to operate on the operating IF selected for each of the at least one IF circuit] generating an operating first intermediate frequency for the first IF circuit only by low-side injection.

3. (Amended) The method according to claim [2] 1 [wherein the step (c) comprises] , further comprising the step of (d) programming [at least one] a programmable frequency generator in response to steps (a) and (b).

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4. (Amended) The method according to claim [2] 1 [wherein the step (c) comprises] , further comprising the step of (e) selecting [at least one] a frequency determining device in response to steps (a) and (b).

5. (Amended) The method according to claim [2] 1 [wherein the step (c) comprises] , further comprising the step of (f) programming the operating frequency of [at least one] a programmable filter circuit in response to steps (a) and (b).

6. (Amended) The method according to claim [2] 1 [wherein the step (c) comprises] , further comprising the step of (g) selecting [at least one] a filter circuit [, the at least one filter circuit having an operating frequency compatible with the operating IF selected for each of the at least one IF circuit] in response to steps (a) and (b).

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7. (Amended) The method according to claim 1 further comprising the step of (h) [preprogramming] pre-programming a database with [possible combinations of the more than one predetermined selectable] a plurality of first values and a plurality of corresponding second values, each first value defining one of the plurality of predetermined selectable receive [frequency] frequencies and each second value defining one of the at least two predetermined second intermediate frequencies [for each of the at least one IF circuit in a manner], the second value selected such that substantially all undesirable spurious frequencies generated will fall outside of the passband of the second IF circuit, [values within the database indicate whether or not the combinations will generate one or more undesirable spurious frequencies;] and

wherein [the selecting] step (b) comprises the steps of:

(i) searching the [database entries associated with the selected one of the more than one predetermined selectable] plurality of first values to locate a first value that matches the operating receive frequency; and

(j) [determining from the database search at least one of the at least two predetermined intermediate frequencies for each of the at least one IF circuit, wherein the determined one of the at least two predetermined intermediate frequencies for each of the at least one IF circuit in combination with the selected one of the more than one predetermined selectable receive frequency will not generate one or more undesirable spurious frequencies;] using the corresponding second value to define the operating second intermediate frequency for the second IF circuit, and

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P2

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P1 A1  
cont'd wherein the method further comprises the step of  
(k) controlling the second IF circuit to operate on the  
operating second intermediate frequency defined in step  
(j). [(k) defining uniquely the at least one of the at least  
two predetermined intermediate frequencies for each of the  
at least one IF circuit, as determined in step (j), to be  
the operating IF for the at least one IF circuit.]

nv 2/15/93 8 10. (Amended) The method according to claim [8] 7  
wherein [the] step [(l)] (k) comprises the step of [(q)] (l)  
programming at least one programmable frequency generator.

nv 2/15/93 9 11. (Amended) The method according to claim [8] 7  
wherein [the] step [(l)] (k) comprises the step of [(r)] (m)  
programming the operating frequency of at least one  
programmable filter circuit.

A2 nv 2/15/93 10 12. (Amended) A heterodyne receiver for receiving radio  
frequency signals comprising:

receive frequency selection means for selecting  
[more than] one of a plurality of predetermined selectable  
receive [frequency] frequencies to be the operating receive  
frequency;

P1 controller means coupled to the receive frequency  
selection means for controlling the heterodyne receiver in  
response to the [selected one of the more than one  
predetermined selectable] operating receive frequency  
selected; [and]

P1 first intermediate frequency (IF) circuit means  
coupled to the controller means for generating a first  
intermediate frequency; and

P1 second [intermediate frequency (IF)] IF circuit  
means coupled to the controller means and to the first IF  
circuit means and having a passband capable of being  
centered on at least two predetermined second intermediate  
frequencies, [of operation; and

wherein the controller means comprises:

P1  
IF] wherein the controller means comprises second intermediate frequency selection means for selecting prior to generation of any undesirable spurious frequency [at least] one of the at least two predetermined second intermediate frequencies to be the operating second intermediate frequency for the second IF circuit means, [of operation;] and

P1  
wherein the selected operating second intermediate frequency is such that substantially all undesirable spurious frequencies generated will fall outside of the passband of the second IF circuit means. [spurious frequency prevention means coupled to the IF selection means for preventing the selection of any intermediate frequencies that will generate one or more undesirable spurious frequencies when mixed with the selected one of the more than one predetermined selectable receive frequency.]

A2 4/29/93  
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P1  
11 13. (Amended) The heterodyne receiver according to claim 11, 10

wherein the [spurious frequency prevention] controller means further comprises [a] memory means [comprising] including a [preprogrammed] pre-programmed database, and

P1  
wherein the pre-programmed database comprises a plurality of first values and a plurality of corresponding second values, each first value defining [possible combinations of the more than] one of the plurality of predetermined selectable receive [frequency] frequencies, and each second value defining one of the at least two predetermined second intermediate frequencies [the at least two predetermined intermediate frequencies of operation, each of the plurality of values further indicating whether or not the combination will generate one or more undesirable spurious frequencies], and

P1  
wherein the second intermediate frequency selection means comprises [logical elements] a processor element for searching the plurality of first values to locate a first value that matches the operating receive

frequency, and for using the corresponding second value to define the operating second intermediate frequency for the second IF circuit means. [to prevent selection of any combinations of IF and the selected one of the more than one predetermined selectable receive frequency if such combinations will generate one or more undesirable spurious frequencies when mixed together.]

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<sup>2/15/93</sup>  
12 ~~14.~~ (Amended) The heterodyne receiver according to claim ~~12~~<sup>10</sup> wherein the second IF circuit means comprises a programmable frequency generator.

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A 2  
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13 ~~15.~~ (Amended) The heterodyne receiver according to claim ~~12~~<sup>10</sup> wherein the second IF circuit means comprises a selectable frequency determining device.

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14 ~~18.~~ (Amended) The heterodyne receiver according to claim ~~12~~<sup>10</sup> wherein the second IF circuit means comprises a programmable [IF] second intermediate frequency filter circuit.

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f/  
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15 ~~17.~~ (Amended) A selective call receiver comprising:  
an antenna [means] for accepting radio frequency (RF) signals comprising selective call information;

a heterodyne receiver [means] coupled to the antenna [means] for receiving the RF signals comprising information and for demodulating the RF signals to derive the information[;], the heterodyne receiver comprising:

a receive frequency [selection means] selector for selecting [more than] one of a plurality of predetermined selectable receive frequencies to be the operating receive frequency;

a first intermediate frequency (IF) circuit coupled to the controller means for generating a first intermediate frequency; and

a second [intermediate frequency (IF)] IF circuit [means, the IF circuit means] coupled to the receive frequency selector and to the first IF circuit, the second

IF circuit having a passband capable of being centered on at least two predetermined second intermediate frequencies [of operation]; and

P1  
a controller [means] coupled to the receive frequency selector [selection means] and to the first and second IF circuits [circuit means] for controlling the heterodyne receiver in response to the operating receive frequency selected, [one of the more than one predetermined selectable receive frequency, the controller means comprising:]

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Conj)  
wherein the controller comprises a second intermediate frequency selector [IF selection means] for selecting prior to generation of any undesirable spurious frequency [at least] one of the at least two predetermined second intermediate frequencies [of operation] to be the operating second intermediate frequency for the second IF circuit,[:] and

wherein the selected operating second intermediate frequency is such that substantially all undesirable spurious frequencies generated will fall outside of the passband of the second IF circuit. [spurious frequency prevention means coupled to the IF selection means for preventing the selection of any intermediate frequencies that will generate one or more undesirable spurious frequencies when mixed with the selected one of the more than one predetermined selectable receive frequency.]

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P1  
16 18. (Amended) The selective call receiver according to claim 17,<sup>15</sup>

wherein the controller further [spurious frequency prevention means] comprises a memory [means, the memory means] including a preprogrammed database, and

P1  
wherein the pre-programmed database [comprising] comprises a plurality of first values and a plurality of corresponding second values, each first value defining [possible combinations of the more than] one of the plurality of predetermined selectable receive [frequency] frequencies, and each second value defining one of the at

least two predetermined second intermediate frequencies [the at least two predetermined intermediate frequencies of operation, each of the values further indicating whether or not the combination will generate one or more undesirable spurious frequencies], and

p1  
wherein the [IF] second intermediate frequency [selection means] selector comprises a processor element for searching the plurality of first values to locate a first value that matches the operating receive frequency, and for using the corresponding second value to define the operating second intermediate frequency for the second IF circuit.

A2  
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[will not select any combinations of IF with the selected one of the more than one predetermined selectable receive frequency if such combinations will generate one or more undesirable spurious frequencies when mixed together.]

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17 19. (Amended) The selective call receiver according to claim 17, wherein the second IF circuit [means] comprises a programmable frequency generator.

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18 20. (Amended) The selective call receiver according to claim 17, wherein the second IF circuit [means] comprises a programmable [IF] second intermediate frequency filter circuit.

Please add the following new claims:

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A3  
19 21. (NEW) The heterodyne receiver according to claim 12, wherein the first IF circuit means generates the first intermediate frequency only by low-side injection.

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Concl  
20 22. (NEW) The selective call receiver according to claim 17, wherein the first IF circuit generates the first intermediate frequency only by low-side injection.

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